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REMARKS

Claims 1-16 are pending in the present Application. Claims 6-13 are currently withdrawn from consideration. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-5 and 14-16 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,576,256 to Monque. Applicants respectfully traverse this rejection.

Monque discloses a catalyst system comprising a catalytically active matrix, a support system distributed through the matrix and a catalytically active phase. (Claim 1) The catalytically active matrix includes aluminum and supports the catalytically active phase that includes a group IIIA metal, a group VIII metal, a group VIB metal and a group VA metal. (Col. 2, line 66 to Col. 3, line 7) The support system or medium is "a hydrothermally stable porous crystalline silicious molecular sieve material such as a zeolite catalyst" (Col. 3, lines 32-34) The catalyst system is made by impregnating the zeolite with gallium and/or chromium, drying the impregnated zeolite, mixing the impregnated zeolite with alumina gel to form a catalyst element and impregnating the catalyst element with an aqueous solution of salts of the group VIII, VIB, and VA metals. The impregnated catalyst element is then calcined. (Col. 4, lines 9-67) Calcining may be carried out at 600°C for 6 hours or in a two stage process, first at a temperature of 120-350°C and then at a temperature of 350-700°C. The Examiner has asserted that although the reference does not specifically disclose that the second temperature must be at 100°C greater than the first, given the fact that reference discloses ranges that could result in a 100°C differential between the first and second temperatures the claimed process is obvious. Applicants disagree.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that

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would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

The pending claims are directed to the calcination of a zeolite catalyst in a two step process wherein the temperature of the second step is at least 100°C higher than the temperature of the second step. Monque does not teach this limitation or provide the motivation to modify the calcination temperatures such that there is at least a 100 degree difference between the first calcination temperature and the second calcination temperature. In fact while Monque expresses a preference for two step calcination Monque also implies that there is little or no difference in the conversion/selectivity/yield of a reaction employing a catalyst calcined at 600°C or calcined at two different temperatures. In fact the ranges of Monque, even in a two step process, permit calcination at a single lower temperature of 350°C.

Additionally, the Examiner has asserted that selection of the calcination temperatures is merely routine optimization. Applicants traverse the rejection on the basis that calcination temperature is a result-effective variable previously unrecognized by the prior art. Where the prior art has not recognized the "result-effective" capability of a particular invention parameter, no expectation would exist that optimizing the parameter would successfully yield the desired improvement. *In re Antonie*, 559 F.2d 618, 195 U.S.P.Q. 6 (C.C.P.A. 1977). In the present case, the cited art discloses a variety of calcination temperatures, but does not mention a 100°C difference between the first and the second calcination temperatures.. The art therefore cannot have suggested any reason to investigate the effect of calcination temperature, let alone the unexpectedly advantageous results obtained through use of the claimed process for producing a catalyst. Applicants therefore respectfully request reversal of the rejection under 35 U.S.C. ' 103(a) and allowance of the claims.

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It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862.

Respectfully submitted,

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